

OPERATION & MAINTENANCE MANUAL
LIGHT, ENDOSCOPIC, INSTRUMENT FIBEROPTIC
120/240Vac, 50/60Hz

DLA 120-91-C-8509
NSN 6515-01-327-4155
BURTON PART NO. 1008822

Model # DLMP-300

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INTRODUCTION

This publication provides maintenance instructions with parts breakdown for the Fiber Optic Endoscopic Instrument Light Source, Model DLMP-300, manufactured by Burton Medical Products. Each unit has an identification label which reflects the model number, operating power requirements and manufacturer.

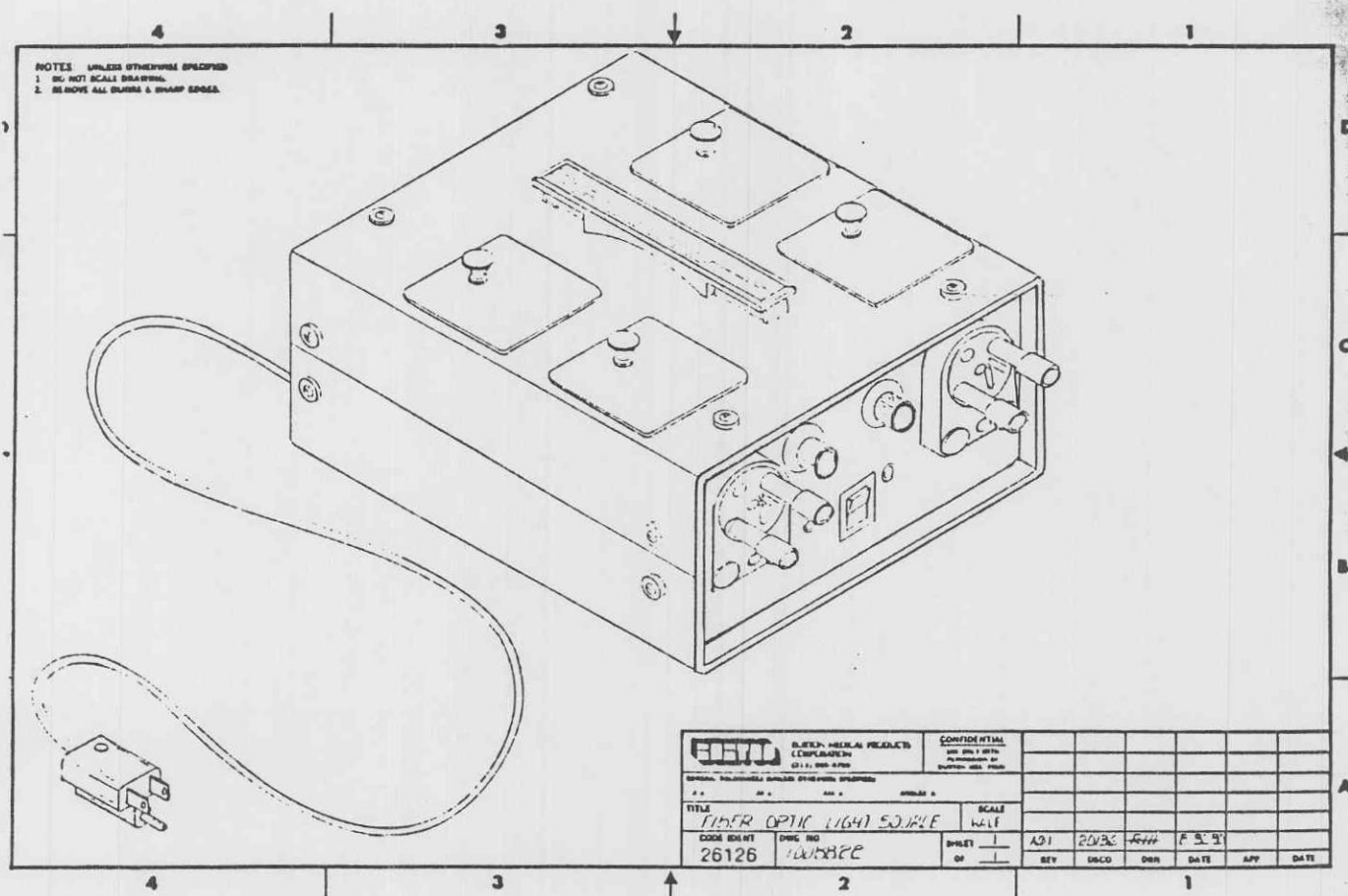


Figure 1. Fiber optic instrument endoscopic light
Model No. DLMP-300 (P/N 1008822)

1.0 DESCRIPTION

The Model 1008822-DUOLUME is a double lamp (dual illuminator) Endoscopic instrument. The illuminator provides a source of light for transmission through fiber optic cables to illuminate the work area. It features two universal faceplates which will accept fiber optic cable connectors from Pilling, Storz, Wolf, Machida or ACMI.

1.1 SPECIFICATIONS

Input voltage.....	115Vac
	240Vac
Bulb	4, DNF
	2 in-use
	2 for spare
Voltage.....	21Vac
Color Temp.....	3400 degrees K
Power.....	150 Watts
Housing.....	5 1/4" X 10" X 11 1/2"
Weight.....	24 lbs
Cord.....	120V, 60Hz, SVT 3-cond.
	Hosp. Grade grounded plug
	12 feet long
Intensity Control.....	6 intensity settings
	low-high
Universal Adapters.....	2 turrets, each containing
	5 ports for fiber optic
	cable connectors manuf.
	by Pilling, Storz, Wolf,
	Machida, ACMI
Transformer.....	21V max

2.0 OPERATING INSTRUCTIONS

- 2.1 Remove the illuminator from the shipping container, checking that all parts on the packing list have been received in good condition.
- 2.2 Pull the nylatch fasteners up to inspect the condition of the "in use" or "spare" lamps of the instrument. Each of (4) tops panels will open to permit inspection of the lamps and to ascertain that they are properly seated and in full contact with the lampholders. Close the panels and push the latches down to the "snap-lock" position.
- 2.3 Main power switch. This switch enables main power and turns the fans ON.
The circuit breaker is placed ahead of the Main Power Switch so that all power to the instrument will be disconnected in case of a shorting problem.
- 2.4 Intensity control. Turn one of the large, black knobs on the front panel (marked "Intensity") in a clockwise direction. As it is rotated clockwise, light intensity increases. Reverse rotation decreases brightness. The last counter clockwise position disconnects power to the lamp(s), but the cooling fans remain on. CAUTION: IT IS RECOMMENDED TO LEAVE THE FANS ON TO ALLOW THE FANS TO COOL THE LAMPS & THE UNIT.
- 2.5 Multiport face plate. This unit incorporates two turrets, each of which accepts Storz, Wolf, Machida, ACMI and Pilling fiber optic cables. Dial in the desired port by turning the turret until the adapter port needed is lined up at the 6 o'clock position. See Figure 2.
- 2.6 For safe operation. It is important to connect the hospital grade 3-conductor grounded plug to an appropriate receptacle. Under no circumstances must this special plug be removed or replaced (except by an equivalent Hospital Grade Plug), or the circuit ground defeated (as with a 2-conductor adapter).

NOTE: For transillumination, always begin with the lowest intensity setting and increase slowly as necessary. Intensity required for each patient and procedure varies. CAUTION: for maximum protection against burns, always use the lowest possible intensity setting.

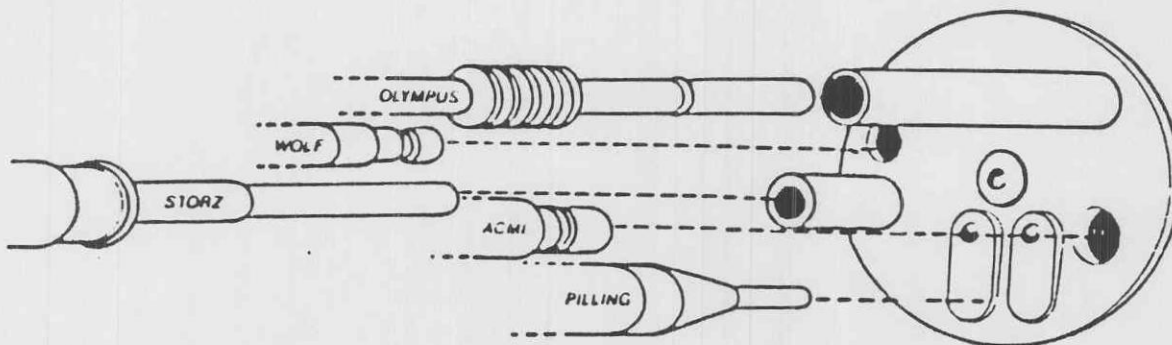


Figure 2.

3.0 MAINTENANCE INSTRUCTIONS

3.1 Bulb removal/installation

When the in-use lamp burns out, switch the lamp cartridge from the "in use" location to the lamp cartridge in the "spare" lamp location by pull on the Nylatch fastener. The red "replace-lamp" warning light will turn on until a new backup lamp is inserted in the backup lampholder.

Close the top panel, push the latches down to the "snap-lock" position, plug the power cord into the power receptacle and the illuminator will again be ready to operate.

To replace the expended lamp see Figure 3.

3.2 Disassembly

Shut off the power and unplug the power cord from the wall socket when performing maintenance, no matter how minor. Although the power is automatically shut off by a protective micro switch when the top panel is opened, it is good practice to remove the AC cord from the outlet as an added precautionary measure.

This unit should not be disassembled unless the test procedure or visual inspection indicates malfunctions within the light. If a malfunction is indicated; the trouble shooting procedure will determine the extent of disassembly necessary to repair or replace defective parts.

3.3 Cleaning

Be sure the power cord is unplugged from the wall socket.

Clean the Endoscopic Instrument by rubbing it with a soft cloth dampened with water, mild soap or detergent solution, or isopropyl alcohol. Do not use abrasive cleaners or organic solvents.

To assure adequate airflow through the instrument, remove any accumulation of dust from the air vents by brush or vacuum the dust.

- 3.4 Storage. Store the unit in a clean and dry environment; protected from dust and grit accumulations. Outdoor storage is not recommended.

Environmental Limits:

Temperature: Min. -30 degrees F (-34 degrees C)
+150 degrees F (+66 degrees C)

Humidity: Min. 0%
Max. 90% (noncondensing)

- 3.5 Changing the Input Voltage. When changes are required from 120V to 240V or vice-versa.
- Remove the cover.
 - Use a flat head screw driver and position the red switch to the desired voltage.
 - Replace the cover.

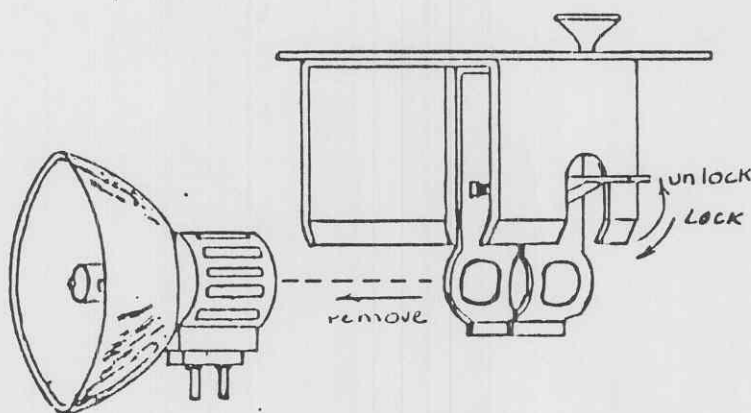


Figure 3. Replace expended lamp

TABLE 1

3.6 MAINTENANCE CHECK-LIST

3.6.1 DAILY CHECK LIST (*DAILY/PRIOR TO USE)

	WORKING (YES)	NOT WORKING (NO)
TURN THE MAIN SWITCH ON FOR POWER DOES THE UNIT ACTIVATE?	_____	_____
TURN THE FAN SWITCH ON ARE THE FANS RUNNING/BLOWING?	_____	_____
ARE THE BULBS ENERGIZED?	_____	_____
ARE THE SPARE LAMPS "GOOD"?	_____	_____
DO THE UNIVERSAL ADAPTERS ROTATE FREELY?	_____	_____
DO ALL COMPONENTS LOOK IN PLACE? (NOT LOOSE OR MISSING)	_____	_____

*NOTE: DEPENDS ON USAGE LEVEL, THE DAILY CHECK LIST CAN BE WEEKLY OR MONTHLY.

IF YES TO ALL QUESTIONS--OK TO USE
IF NO TO ANY QUESTION--REFER TO TROUBLESHOOTING TABLE

3.6.2 ANNUAL CHECK LIST

REMOVE DUST FROM UNIT:

Disassemble the unit by removing all 4-lamp cartridges, remove all screws and finishing washers from top housing and the back panel. Remove the 2 brass screws that hold each fan onto the finger guards. Then gently remove the motors and fans from the finger guards. Clean the fans and the finger guards by vacuuming the accumulated dust or wiping with a moist cloth. Reassemble.

TABLE 2
TROUBLESHOOTING

TROUBLE	PROBABLE CAUSE	REMEDY
No light	power cord unplugged	plug cord into proper receptacle
	top panel open	close panel
	defective panel safety switch	replace switch
	defective bulb	replace bulb
	no input voltage	have facilities maintenance personnel check input power source
	defective wiring	inspect wiring; repair as required
	defective transformer	replace transformer
No air	defective fan	replace fan
	defective fan switch	replace switch
Replacement bulb light not lit	defective LED	replace LED
	defective circuitry	check and replace as necessary

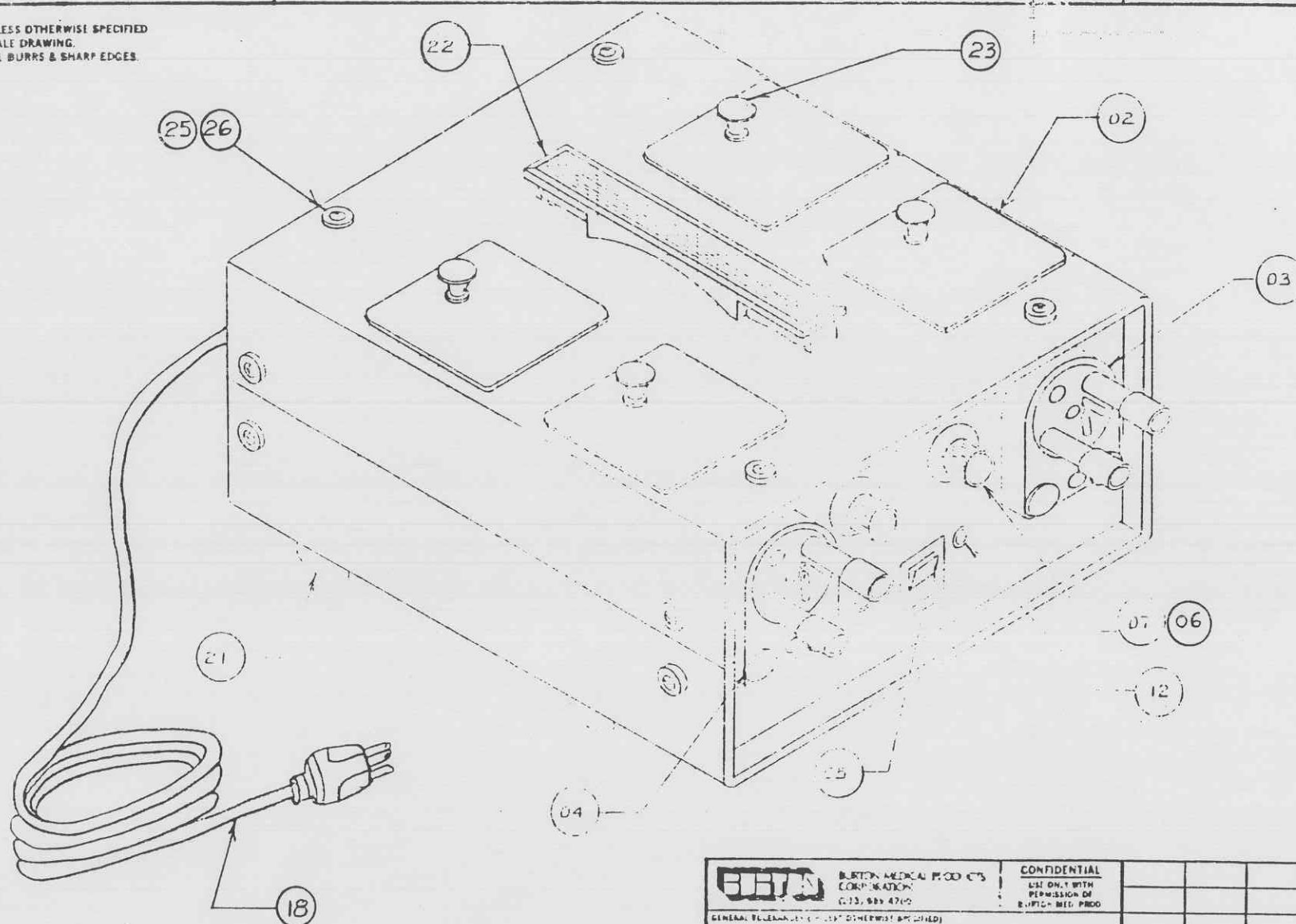
TABLE 3
PART LIST

ITEM	DESCRIPTION	PART NO.	QTY.
01	Housing assembly	DLMP-300-01	1
02	Lamp module assembly	DLMP-300-02	4
03	Multiple port fiberoptic assembly	DLMP-300-03	2
04	Fiber receptacle screw	DLMP-300-04	4
05	On/Off Main power switch	DLMP-300-05	1
06	Intensity selector switch	DLMP-300-06	2
07	Intensity selector knob	DLMP-300-07	2
08	Circuit breaker	DLMP-300-08	1
09	120V/240V selector switch	DLMP-300-09	1
10	Power transformer, 120V/240V	DLMP-300-10	2
11	Fan(motor,blades & interior guard)	DLMP-300-11	2
12	Spare lamp indicator light	DLMP-300-12	2
13	Lamp (DNF)	DLMP-300-13	4
14	Lamp socket	DLMP-300-14	4
15	130K 1/4W resistor	DLMP-300-16	2
16	Wiring block	DLMP-300-17	A/N
17	Power cord	DLMP-300-18	1
18	Strain relief	DLMP-300-19	
19	Fan screen	DLMP-300-20	2
20	Rubber feet	DLMP-300-21	4
21	Handle	DLMP-300-22	1
22	Latch assembly for lamp module	DLMP-300-23	4
23	Plastic Louvre	DLMP-300-24	8
24	Screw Phillip	DLMP-300-25	16
25	Countersink Finishing	DLMP-300-26	16

FIGURE 4. DUOLUME ASSEMBLY

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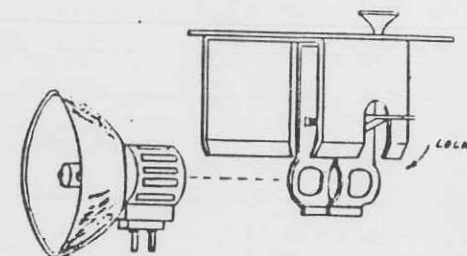
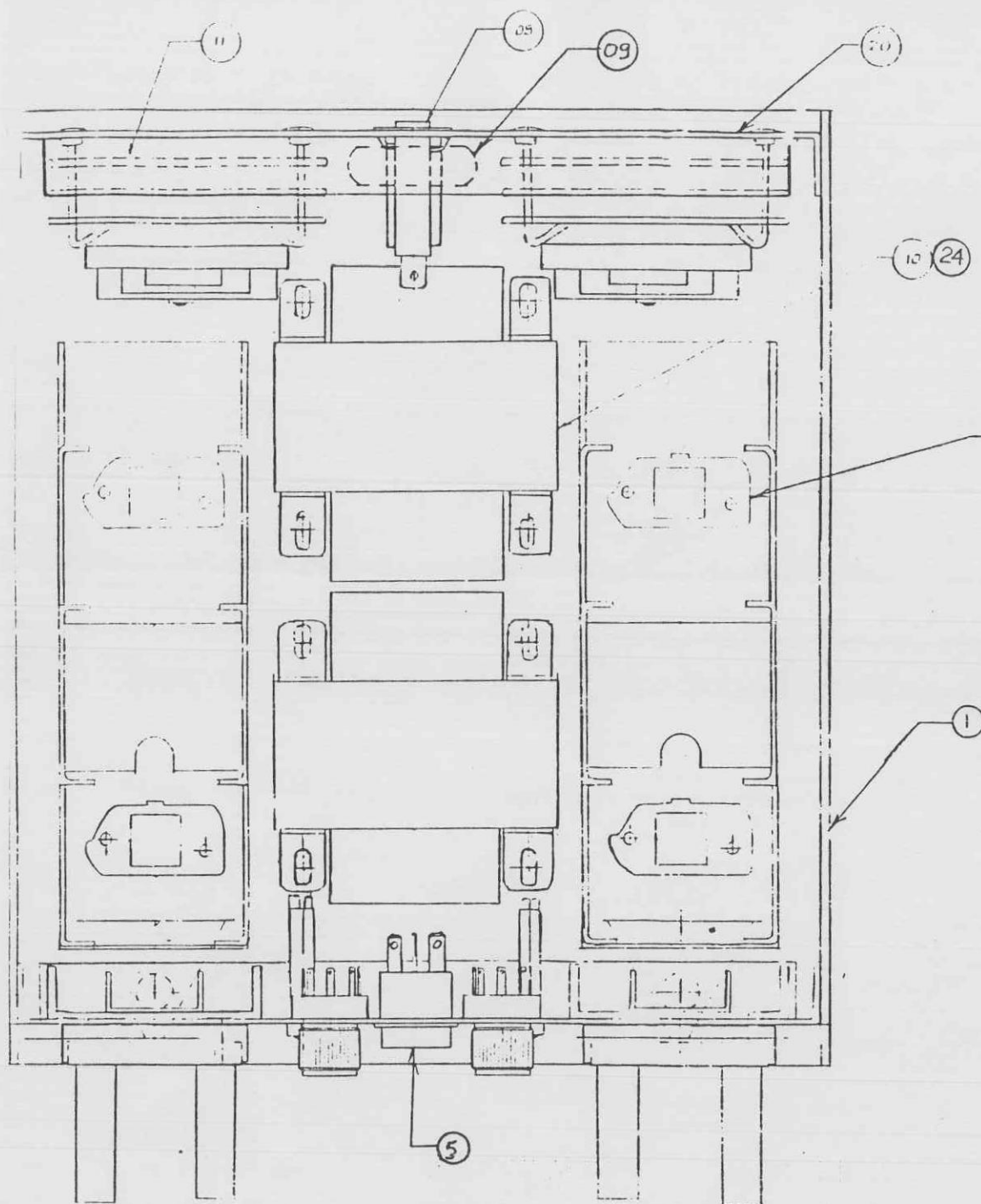
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1
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- ES: UNLESS OTHERWISE SPECIFIED
NOT SCALE DRAWING.
REMOVE ALL BURRS & SHARP EDGES.



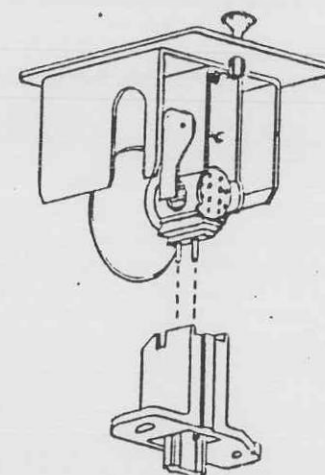
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GENERAL DIMENSIONS (UNLESS OTHERWISE SPECIFIED)					
TITLE		SCALE			
CODE IDENT.		DWG. NO.		SHEET	
26126				OF 2	
REV	DESC	DRN	DATE	APP	DATE
			8 30 50		

NOTES: UNLESS OTHERWISE SPECIFIED
 1. SCALE DRAWING
 2. ALL BURNS & SHARP EDGES

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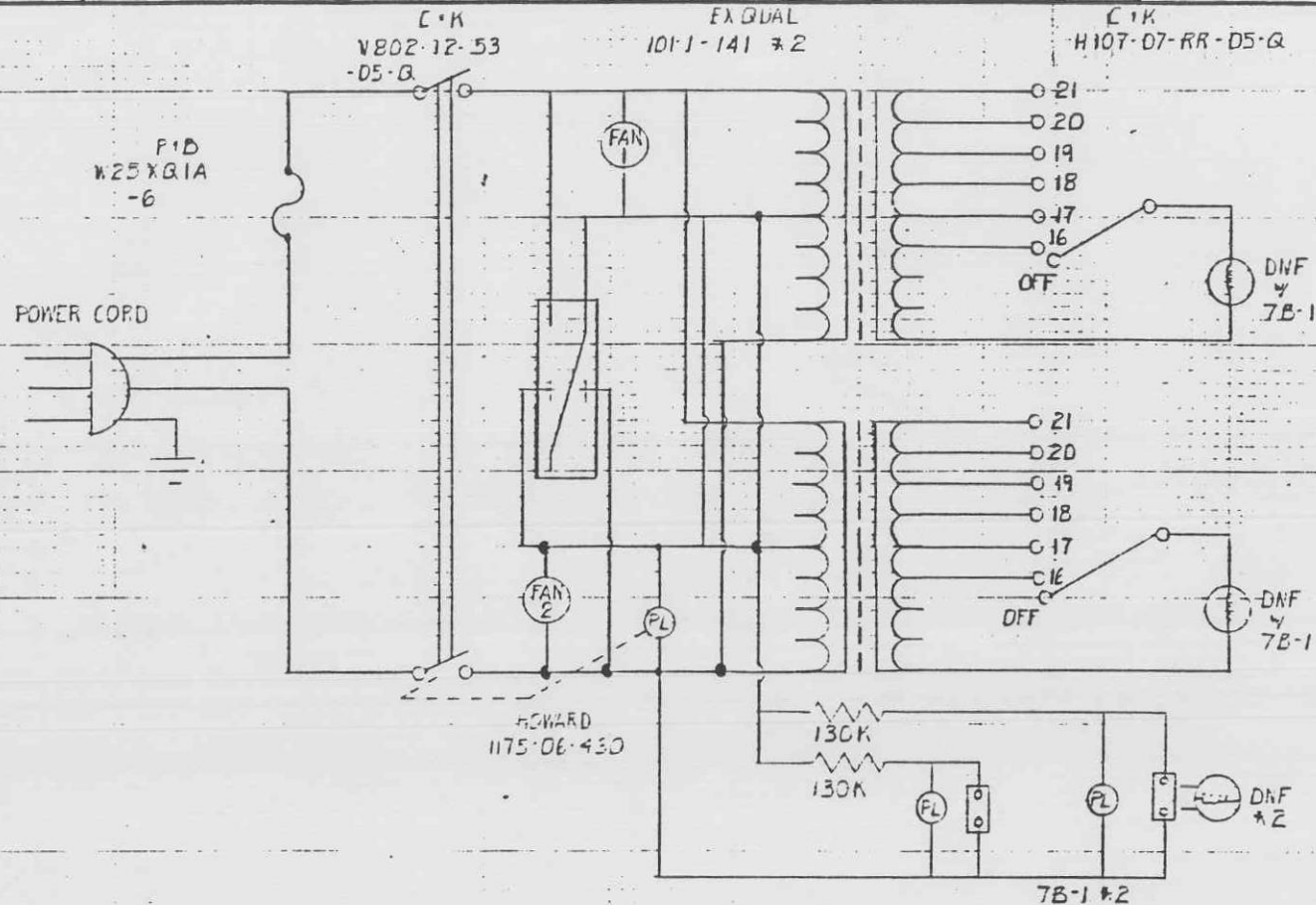
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TITLE: ASSEMBLY		SCALE:	
CODE IDENT: 26126	DWG NO:	SHEET: 2/2	DATE:
REV:	DWG:	DRA:	DATE:
APP:	DATE:	APP:	DATE:

FIGURE 5. SCHEMATIC/WIRING DIAGRAM

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- NOTES: UNLESS OTHERWISE SPECIFIED
1 DO NOT SCALE DRAWING.
2 REMOVE ALL BURRS & SHARP EDGES.



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GENERAL TOLERANCES (UNLESS OTHERWISE SPECIFIED)					
FRACTIONS	DECIMALS	ANGLES			
TITLE			SCALE		
Schematic/Wiring Diag.					
CODE IDENT.	DWG. NO.	SHEET			
26126		OF			
REV	DISCO	DRN	DATE	APP	DATE

TABLE 1. DATA SHEET TOOLS & TEST EQUIPMENT LISTEnd Item Name: Endoscopic, Light End Item Source: Burton Medical Products Contract No: DLA120-91-C-8509End Item NSN: 6515-01-327-4155 Reference No: Model DLMP-300 (p/n 1008822)

TOOLS AND TEST EQUIPMENT LIST

<u>1</u> <u>ITEM No.</u>	<u>2</u> <u>CAGE</u>	<u>3</u> <u>PART NO.</u>	<u>4</u> <u>ITEM NAME</u>	<u>5</u> <u>UNIT PRICE</u>
0001	26126	0001301	Screwdriver, Phillips 6"	\$12.50
0002	26126	0001302	Screwdriver, Flat 6"	\$12.50
0003	26126	0001303	Wrench, Allen 1/8"	\$ 0.75
0004	26126	0001304	Wrench, Allen 1/16"	\$ 0.75
0005	26126	0001305	Bio-Tek Model 170 Digital Safety Analyzer	\$1050.00
0006	26126	0001306	ACMI Fiberoptic adapter	\$187.00
0007	26126	0001307	Olympus Fiberoptic adapter	\$195.5
0008	26126	0001308	Pilling Fiberoptic adapter	\$190.4
0009	26126	0001309	Storz Fiberoptic adapter	\$195.5
0010	26126	0001310	Wolf Fiberoptic adapter	\$187.00

TABLE II. DATA SHEET, CONSUMABLE/DURABLE ITEM LIST

End Item Name: Endoscopic, Light End Item Source: Burton Medical Products Contract No. DLA120-91-C-8509End Item NSN: 6515-01-327-4155 Reference No: Model DLMP-300 (p/n 1008822)

CONSUMABLE/DURABLE ITEM LIST												
1	2	3	4	5	6	7	8	9	10	11	12	13
ITEM No.	CAGE	PART No.	ITEM NAME	U/I	EC	SL	PLT	QTY/EI	QUP	TO REC	UNIT PRICE	REFERENCE
0001	26126	DLMP300-13	Lamp	EA	1	X	4mo.	4	4	500kits	37.00	Fig.4 in the manual
0002	26126	DLMP300-08	Circuit Breaker	EA	5	X	4mo.	1	1	100kits	8.00	Fig.4 in the manual
0003	26126	DLMP300-14	Lamp Socket	EA	1	X	4mo.	4	4	100kits	7.00	Fig.4 in the manual
0004	26126	DLMP300-23	Nylatch Fastener	EA	7	X	4mo.	4	4	100kits	1.00	Fig.4 in the manual
0005	26126	DLMP300-05	On/Off Main Switch	EA	1	X	4mo.	1	1	100kits	6.00	Fig.4 in the manual
0006	26126	DLMP300-06	Intensity Switch	EA	5	X	4mo.	2	2	100kits	23.00	Fig.4 in the manual
0007	26126	DLMP300-12	Spare Indicator Lt.	EA	5	X	4mo.	2	2	100kits	3.00	Fig.4 in the manual
0008	26126	DLMP300-18	Power Cord	EA	1	X	4mo.	1	1	100kits	19.00	Fig.4 in the manual
0009	26126	DLMP300-02	Lamp Module Assy.	EA	1	X	4mo.	4	4	50kits	47.00	Fig.4 in the manual
0010	26126	DLMP300-03	Multi-port Assy.	EA	7	X	4mo.	2	2	50kits	120.00	Fig.4 in the manual
0011	26126	DLMP300-04	Fiber Recept.screw	EA	6	X	4mo.	4	4	50kits	2.00	Fig.4 in the manual
0012	26126	DLMP300-07	Intensity Sel.Knob	EA	5	X	4mo.	2	2	50kits	8.00	Fig.4 in the manual
0013	26126	DLMP300-09	120/220 Sel.switch	EA	1	X	4mo.	1	1	50kits	6.00	Fig.4 in the manual
0014	26126	DLMP300-10	Transformer	EA	1	X	4mo.	2	2	50kits	47.00	Fig.4 in the manual
0015	26126	DLMP300-11	Fan	EA	1	X	4mo.	2	2	50kits	21.00	Fig.4 in the manual
0016	26126	DLMP300-17	Wiring Block	EA	5	X	4mo.	1	1	50kits	4.00	Fig.4 in the manual
0017	26126	DLMP300-16	130k 1/4w resis.	EA	1	X	4mo.	2	2	50kits	1.00	Fig.4 in the manual
0018	26126	DLMP300-19	Strain relief	EA	5	X	4mo.	1	1	50kits	1.00	Fig.4 in the manual
0019	26126	DLMP300-20	Fan Screen	EA	5	X	4mo.	2	2	50kits	4.00	Fig.4 in the manual
0020	26126	DLMP300-21	Rubber feet	EA	6	X	4mo.	4	4	50kits	1.00	Fig.4 in the manual
0021	26126	DLMP300-24	Plastic Louvre	EA	7	X	4mo.	6	6	50kits	2.00	Fig.4 in the manual